Listing of the Claims:

Claims 1 – 9 (Cancelled).

10. (Currently Amended) A phased array for controlling a radiation pattern comprising:

a plurality of first tunable elements connected in series between adjacent power divider ports;

a source connected to one input of the plurality of first tunable elements at a first power divider port;

a respective antenna connected to each of the power divider ports; and

a respective second tunable element connected in parallel with each antenna, wherein each second tunable element is a capacitor, and each capacitor is one of a switching fixed capacitor and a switching transmission line.

Claims 11 – 32 (Cancelled).

33. (Cancelled)

34. (Currently Amended) ~~The phased array of claim 33 wherein~~

In a phased array for controlling a radiation pattern of an array of antennas ,the single extended resonance circuit topology further ~~comprises~~ including:

a single extended resonance circuit topology for performing both functions of power dividing and phase shifting, the single extended resonance circuit topology including a plurality of antennas defining an array, a first tunable impedance connected in series between each respective pair of adjacent antennas, and a second tunable impedance connected in parallel with each respective antenna, wherein a phase of each respective antenna is controlled by applying a voltage to one of the first and second tunable impedances within the phased array.

an extended resonance dividing circuit coupled to each of an N plurality of ports, the extended resonance dividing circuit including the first tunable impedance connected between

each of the N plurality of ports, the tunable impedance transforming the admittance of one port coupled to the tunable impedance to its the conjugate of the admittance at a second one of the N plurality of ports, a power source having an impedance matched to the impedance of an endmost port in the array, such that resonance of all of the ports with one another makes a voltage at each port a predetermined magnitude, and a second impedance coupled between each port and ground to vary the relative phase shift between each port.

35. (Currently Amended) The phased array of claim ~~33~~ 40 wherein the ~~first tunable~~ series impedance is a tunable inductor.

36. (Currently Amended) The phased array of claim ~~33~~ 40, wherein the ~~first tunable~~ series impedance is an impedance inverter including two quarter-wave transformers with a tunable capacitor connected in shunt therebetween.

37. (Currently Amended) The phased array of the claim ~~33~~ 40, wherein the ~~first tunable~~ series impedance is a tunable transmission line having a length, and the ~~second tunable~~ shunt impedance is a tunable capacitance.

38. (Previously Presented) The phased array of claim 37 further comprising:

a single biased voltage controlling the tunable capacitance connected to each of the plurality of ports.

39. (Currently Amended) The phased array of claim ~~33~~ 40, wherein the phase shift between successive ports ~~are a predetermined magnitude~~ is equal.

40. (Currently Amended A phased array for controlling a radiation pattern of an array of antennas comprising:

an array of series connected antenna cells;

a power source connected to the array; and

each antenna cell including ~~a power divider port, and~~ an antenna connected to the ~~power divider port~~ a port, and an extended resonance circuit coupled to each ~~power divider~~ port in each antenna cell across the array, the extended resonance circuit ~~performing power division and phase shifting for the power divider port and the antenna in each antenna cel~~ including a series impedance connected between each port and a shunt impedance connected to each port; each serial impedance having a magnitude to transform the admittance at each port to a conjugate admittance such that, when all of the ports are resonated, the power is equally divided at each port and a phase shift exists between each port.

41. (Currently Amended)The phased array of claim 40, ~~wherein the extended resonance circuit~~ further ~~comprises~~ comprising:

the series impedance is a tunable inductance connected to ~~the power divider~~ each antenna cell port, and ~~a~~ the shunt impedance is a tunable capacitance connected to the ~~power divider~~ port; ~~the tunable inductance and the tunable capacitance cooperating to perform power division and phase shifting for the antenna in each cell~~.

42.-51 (Cancelled)